High-risk Occupations: How Leadership, Stress, and Ability to Cope Influence Burnout in Law Enforcement

Lisa M. Russell
Indiana University Southeast

Brooklyn M. Cole
Radford University

Raymond J. Jones, III
University of Minnesota Duluth

Due to a dearth of research in high-risk occupations and the interactive effects with stress in determining the boundary conditions coping may have on first responder's performance, we surveyed 9 police agencies to determine the 3-way interaction between transformational leadership (TFL), coping, and stress on burnout. Findings indicate when high levels of stress and coping are present there are differences in perception of depersonalization between high and low-stress individuals with high and low coping. Respondents with higher perceived task-coping skills engaged in higher overall levels of depersonalization. Results indicate that the interaction of TFL and coping may actually augment burnout.

The primary focus of this paper is how leaders influence burnout in the high-risk occupation of law enforcement, and how stress and coping interact to influence this relationship. The importance of research in high-risk occupations is salient given the recent events at the Boston Marathon and the subsequent explosion at the West Fertilizer plant in West, TX. High-risk occupations present unique challenges due to increased levels of danger and exposure of workers to different types of stress than less risky occupations. Moreover, organizations operating in dangerous or risky environments face higher employee training and replacement, worker's compensation, and healthcare costs than those functioning in less risky environments (Deschamps, Pagnon-Badiner, Marchand & Merle, 2003). Thus, it is important to study these relationships among police because this occupation includes the most stressful and high-risk employee group (Dantzer, 1987).

There is substantial research in the police and criminal justice literature examining how stress affects various outcomes (Deschamps et al., 2003) and considerable evidence documenting the effects of stress on individual well-being (e.g., Asterita, 1985; Bakker & Heuven, 2006; Jamal & Baba, 2000), and organizational performance (e.g., Bartone, 2006; Tang & Hammontree, 1992). In particular, officers suffer higher rates of burnout, absenteeism, illness, and premature retirement than other workers (Hart, Wearing and Headley, 1995; Violanti and Aron, 1993). There is a dearth of research in high-risk occupational settings; however, and none centering on the influence of leader behavior on burnout and how this relationship varies by levels of stress and coping ability. The purpose of this study is to analyze the relationship between transformational leadership and the three dimensions of burnout (i.e., emotional

exhaustion, depersonalization, personal accomplishment) in the high-risk occupation of law enforcement. Furthermore, we explore how stress and coping individually as well as interactively moderate this relationship. Thus, the research question addressed within this study is: *What is the relationship between transformational leadership and burnout in high-risk occupations as governed by the interactions of stress and coping?*

THEORETICAL FRAMEWORK AND HYPOTHESES

Constructs of interest to this study include transformational leadership behavior, police stress and coping, and three dimensions of burnout (i.e., emotional exhaustion, depersonalization and personal accomplishment). Figure 1 depicts the research model for this study proposing relationships between transformational leadership and burnout as governed by stress and coping.

FIGURE 1
HYPOTHESIZED MODEL OF TRANSFORMATIONAL LEADERSHIP, STRESS, COPING, AND BURNOUT IN HIGH-RISK OCCUPATIONS
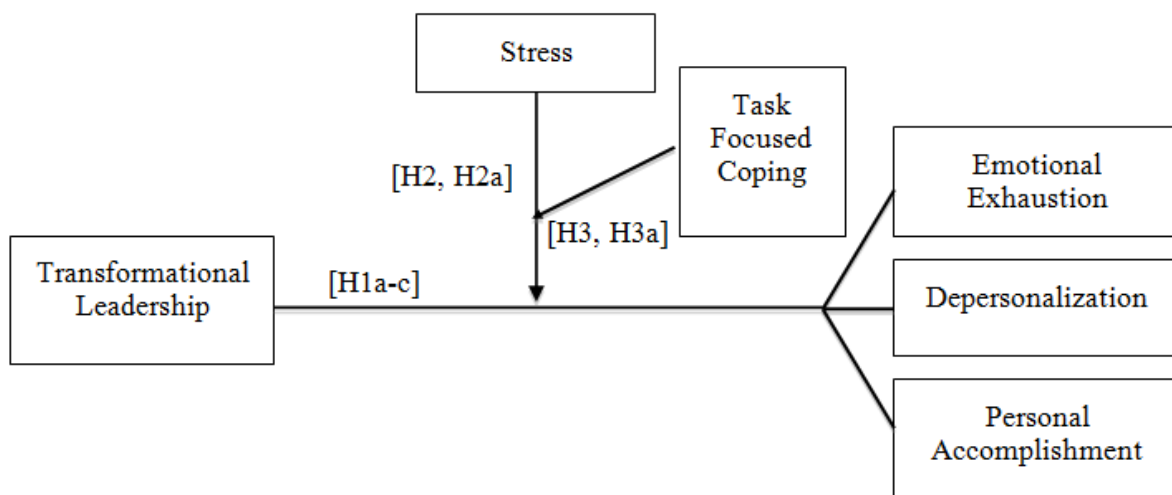
Transformational Leadership

Transformational leaders influence both values and aspirations of followers by activating higher-order needs and arousing followers to transcend self-interest for the benefit of the organization (Bass, 1985; Podsakoff, MacKenzie & Bommer, 1996: 259-260; Rowold & Schlotz, 2009; Yukl, 1989, 2012). These behaviors are believed to augment the impact of transactional leader behavior on follower's behavioral and performance outcomes because followers trust and respect transformational leaders. In effect, transformational leader behaviors influence followers' values, activate followers' higher-order needs, and motivate followers to self-less action on behalf of the leader's organization (Bass, 1985; Podsakoff et al., 1996: 259-260; Yukl, 1989, 2012).

It is appropriate to investigate transformational leader behaviors in police organizations due to the importance of trust between transformational leaders and their followers. In essence, the same level of trust between partners in life and death circumstances extends to supervisor-subordinate relationships within organizations which allows police to trust transformational leaders to support officers when bureaucracy, departmental policy, and life and death decision-making intersect. Leaders in police organizations who effectively exhibit transformational leader behaviors to followers whose beliefs, attitudes, and core values are changed enhance performance beyond what is required by the organization (Podsakoff et al., 1996; Podsakoff, MacKenzie, Moorman & Fetter, 1990).

Researchers (Engel, 2001, 2002) identified behaviors (e.g., traditional, innovative, supportive, and active) of front-line supervisors and follower behavior tied to lower level leader behavior. Officers with more active (i.e., on the job) versus those with more innovative (i.e., transformational) supervisors engaged in more self-initiated and problem solving versus administrative tasks. In effect, supervisors at both higher and lower levels of the organization have the ability to influence officers with their leadership styles. Other researchers argue that transformational leaders drive learning throughout the organization through shared vision and this learning results in shared learning at all levels – including that of the individual level (Loon, Lim, Lee, & Tam, 2012). Moreover, direction from the top as an exemplar of model behavior is crucial in high-risk organizations because the consequence of failure can be loss of life (Weik, Sutcliffe & Obstfeld, 1999, 2005). Evaluating transformational leaders within the context of this study is both practical and beneficial because departments often have ranked officers serving in both top level and supervisory capacities, while others have departmental leaders spend time with the rank-and-file officers and deputies to stay connected with the troops.

Relationships between transformational leader behavior and outcomes have been empirically substantiated. (2011, 2014) found that transformational leader behaviors mitigate burnout among members in high-risk occupations under conditions of low stress but less so under increasingly stressful conditions. Bartone (2006) found leaders in high-risk occupational settings shape the sense-making process and interpretation of stressful circumstances through sharing positive construction or reconstruction of shared stressful experience. Harris and Kacmar (2005) found that supervisor behavior like leader-member exchange, participative decision-making, and supervisor-follower communication moderates the relationship between perceptions of politics, a stressor, and outcomes like job satisfaction and perceived strain like anxiety among organizational members of highly bureaucratic organizations. Densten (2005) found that visioning leader behaviors of senior managers from a law-enforcement organization influenced the burnout process among followers. Thus, transformational leadership is beneficial in influencing outcomes such as burnout among police.

Burnout

Burnout is defined as a particular type of response among human service providers to occupational stress emanating from emotionally charged and demanding interactions with recipients (Bakker & Heuven, 2006; Maslach, 1982; Maslach & Schaufeli, 1993). Research on burnout evolved from research on emotion, arousal, and how individuals effectively cope with arousal (Maslach & Jackson, 1984). Early burnout research focused on service professionals in the healthcare industry (i.e., nurses) but has since expanded to include a wide range of occupational groups (Cordes, Dougherty & Blum, 1997; Maslach & Jackson, 1984; Maslach, Jackson, & Leiter, 1996) and it is largely accepted that individuals in a wide array of occupations involving a high degree of interpersonal interaction are prone to burnout (Cordes & Dougherty, 1993). Police officers represent one such occupational group.

The burnout construct is multidimensional (Maslach, 1982) and the respective dimensions include emotional exhaustion like diminished or depleted energy and fatigue; depersonalization such as cynicism directed toward both the organization and its recipients; and personal accomplishment including (decreased) feelings of professional efficacy (Cordes & Dougherty, 1993; Maslach, Jackson, & Leiter, 1996). High degrees of burnout are likely to occur when service providers experience increasing levels of both depersonalization and emotional exhaustion, and decreasing levels of personal accomplishment (Maslach et al., 1996). Low degrees of burnout are related to lower degrees of depersonalization and emotional exhaustion coupled with higher degrees of personal accomplishment. Moderate levels of all three dimensions result average levels of burnout.

Researchers associated with early conceptualizations of burnout (e.g., Maslach & Jackson, 1984) propose a relationship among the dimensions, such that frequent interpersonal contact between a service provider and recipient of the service increases the provider's perceived levels of emotional exhaustion. One way in which providers cope with this increase is to emotionally distance themselves from the recipient through depersonalizing the exchange by viewing the recipient in a way that diminishes

emotional affiliation is one such depersonalization strategy. Engaging in depersonalization may further influence performance and result in diminished levels of personal accomplishment.

The Influence of Transformational Leadership on Burnout

Studies assessing relationships between leadership, and burnout among police (e.g., Densten, 2005; Thompson, Kirk, & Brown, 2005) are noteworthy because they evaluate how leadership and supervisory support influence burnout. In Denston's (2005) study, the two facets of inspirational motivation exhibited by law-enforcement senior managers appeared to perform disparate roles in the decrease of burnout among followers, and the effectiveness of inspirational leaders appeared to be achieved through the pivotal role emotional exhaustion played in burnout. Thompson et al. (2005) found supervisor support, reduced role stressors among policewomen. Supervisor support specifically reduced work stressors such as role overload and role ambiguity, which then influenced emotional exhaustion among respondents. Thompson et al.'s findings indicate that supervisor support indirectly affects the family environment through its impact on role stressors and emotional exhaustion.

Researchers have found that while the overall level of burnout among police compared to other occupational groups (i.e., health care workers) is low, job demands, most notably work-family pressures, are important predictors for all dimensions of burnout for this high-risk occupational group. Others (Lambert, Altheimer & Hogan, 2010) contend that social support positively influences burnout. Specifically, Lambert and colleagues suggest that although not all types of social support attenuated burnout, each dimension of burnout perceived among correctional staff in their study was influenced by at least one type of social support (i.e., management, coworker, supervisor, family-and-friends) pointing to the importance of social support (particularly supervisory and managerial) in reducing burnout among this high-risk occupational group. The Lambert study is particularly salient because of its tie to supervisory and managerial role in providing social support. Transformational leaders, by definition, provide social support to followers by attending to their needs. Moreover, Podsakoff's scale items (used in the present study) captured social support via items like *Fosters collaboration among work groups* and *Encourage employees to be "team players"* (Podsakoff et al., 1990). Consequently, transformational leadership encompasses supervisor social support.

Based on documented relationships between transformational leadership and outcomes in the burnout, police and correctional literature (e.g., Densten, 2005; Lambert et al., 2010; Martinussen, Richardson, & Burke, 2007; Thompson et al., 2005) and in accordance with observed associations between work perceptions and burnout among police officers surveyed in this study (e.g., Bakker & Heuven, 2006; Maslach, 1982; Maslach & Schaufeli, 1993), transformational leader behavior in police work is expected to have a positive association with emotional exhaustion and depersonalization, and negative association with personal accomplishment dimensions of burnout. Accordingly,

> *Hypothesis 1a*: There is a negative relationship between transformational leadership and emotional exhaustion.
> *Hypothesis 1b*: There is a negative relationship between transformational leadership and depersonalization.
> *Hypothesis 1c*: There is a positive relationship between transformational leadership and personal accomplishment.

The Role of Stress on the Leader-Burnout Relationship

For the purpose of this study, stress is defined as a relationship between a person and the environment appraised as taxing or exceeding one's resources and endangering his or her well-being (Lazarus & Folkman, 1984). While there are extreme conditions under which stress is likely to result for nearly everyone, individual differences create variability in response to stress. Of particular interest to this study is how increasing levels of stress and coping influence the relationship between transformational leadership and burnout among workers in high-risk occupations.

Factors contributing to stress in police work include tough physical demands and life threatening situations (Moon & Jonson, 2012). Moreover, economic, social, and technical changes are transforming societal expectations creating new work demands of police officers (Deschamps et al., 2003). While organizational and operational factors contribute to police stress, organizational factors are repeatedly identified as the strongest police stressors (Shane, 2010; Violanti & Aron, 1995). Organizational stressors include interdepartmental practices (e.g., authoritarian structure; lack of participation in decision making which directly influence accomplishment of daily tasks; punishment-centered managerial philosophy; unfair discipline; and lack of administrative support), while operational stressors include job specific tasks (e.g., shift work, danger, apathetic public perceptions, boredom, and contending with suffering and death). Police face stressful events with the potential to encounter harm (e.g., Anshel, 2000; Anshel, Robertson & Caputi, 1997; Deschamps et al., 2003; He, Zhao & Archbold, 2002; Violanti & Aron, 1995) including stopping, contacting, and arresting unlawful and often dangerous people. Officers also face what they perceive as unfair workplace treatment such as forced overtime and completing paperwork off the clock and a general lack of support.

These factors result in more stress-related complaints among police than for workers in other professions (Hart et al., 1995; Lobel & Dunkel-Schetter, 1990; Violanti & Aron, 1993). Police also suffer more illness, absenteeism, burnout, and premature retirement as a result of these stress-related problems (Band & Manuele, 1987; Brown & Campbell, 1990, 1994; Burke, 1993). Also, compared to the general population, police officers face increased rates of heart disease, stomach disorder, alcohol and drug abuse, divorce, and suicide due to ineffective coping with stress (Lord et al., 1991; Rogers, 1976). There is evidence showing the effects of stress on both individual well-being of police and organizational performance (e.g., Asterita, 1985; Bakker & Heuven, 2006; Bartone, 2006; Jamal & Baba, 2000; Tang & Hammontree, 1992). More recently, researchers (Gerber, Hartman, Brand, Holsboer-Trachler & Pühse, 2010) found that stressful shift work significantly increased sleep complaints and decreased use of primary health care among Swiss police. Cynicism was negatively associated with leadership among officers in a study of Norwegian police and their leaders (Martinussen et al., 2007). These researchers also found that social support negatively influenced both emotional exhaustion and cynicism dimensions of burnout among police in their study. Shane (2010) found a negative relationship between leadership and performance outcomes of followers in his study of stressors among officers in urban police in North America indicating that police in these types of departments find it difficult to perform under the leadership styles in some bureaucratic police organizations. Clearly, the level of stress among police officers is not simply an inherent component of police work but results from a combination of situational factors including perceived levels of burnout and how departmental leadership influences these relationships under increasingly stressful circumstances (Lazerus & Folkman, 1984). Thus, increasing levels of stress will tend to mitigate the effect transformational leaders have on follower's perception of burnout in the workplace. Accordingly,

> *Hypothesis 2: The relationship between transformational leadership and burnout depends upon stress.*
> *Hypothesis 2a: The relationship between transformational leadership and emotional exhaustion is moderated by stress such that when stress is perceived to be high the negative impact between leadership and emotional exhaustion is weaker than when stress is perceived to be low.*
> *Hypothesis 2b: The relationship between transformational leadership and depersonalization is moderated by stress such that when stress is perceived to be high the negative impact between leadership and depersonalization is weaker than when stress is perceived to be low.*
> *Hypothesis 2c: The relationship between transformational leadership and personal accomplishment is moderated by stress such that when stress is perceived to be high the positive impact between leadership and burnout is weaker than when stress is perceived to be low.*

The Influence of Coping on the Leader-Burnout Relationship

In defining coping, we have incorporated a multidimensional interaction model of stress and coping (Endler, 1997). As such coping is defined as dynamic cognitive and behavioral efforts aimed at managing both internal and external demands appraised by an individual as straining or surpassing one's resources (Lazarus & Folkman, 1984). The definition of coping used here is sufficiently broad in that it includes both cognitive and behavioral efforts used by an individual and encompasses both internal and external demands of taxing transactions exceeding an individual's ability to adequately deal with the situation (Folkman, Lazarus, Dunkel-Schetter, Delongis, & Gruen, 1986; Lazarus & Folkman, 1984; Latack & Havlovic, 1992). For the purpose of this paper, coping is defined as task-oriented, emotion-oriented, and avoidance coping mechanisms (Endler & Parker, 1999). The theoretical and empirical rational underpinning these three dimensions begins with a general consensus in the coping literature of the basic distinction between problem-focused and emotion-focused coping, as most coping measures include scales assessing these two dimensions (e.g., Billings & Moos, 1981, 1984; Folkman & Lazarus, 1980, 1985, 1986; Endler & Parker, 1999; Pearlin & Schooler, 1978). Because there is disagreement among researchers as to the role coping plays in attenuating stress, and due to the stressful and sometimes and life-threatening nature of police work, it is important to study the role of coping among police.

Researchers generally agree that task focused coping is among the coping dimensions most commonly researched (e.g., Billings & Moos, 1981, 1984; Endler, 1997; Endler & Parker, 1999; Lazarus & Folkman, 1984). This dimension is described as a task-oriented effort focused toward problem solving, cognitive restructuring to better understand or reassess a problem or attempts by an individual to change the situation or circumstances surrounding the problem (Endler & Parker, 1999). Due to these characteristics of task-focused coping and because police officers report more problem-focused focused coping strategies in response to stressful work events and use fewer emotion-focused coping strategies (Evans, Coman, Stanley & Burrows, 1993), the present study focuses on task-focused coping.

Empirical studies highlight the importance of coping to the relationships proposed in the present research. For example, Arter (2008) suggests highly stressed police officers are more likely to engage in deviant, as opposed to citizenship, behaviors. Results from Arter's study also demonstrate adoption of adaptive, as opposed to maladaptive, coping strategies diminished the levels of deviance reported by officers in all three of the categories evaluated. Researchers (Kohan & Mazmanian, 2003) evaluating the influence of stress on other behavioral outcomes find coping strategies moderate the relationships. Specifically, these researchers find that problem- and emotion-focused coping moderates, but does not mediate, modeled relationships. Moreover dispositional affect had neither moderating nor mediating effects on the relationship between work experiences and evaluated outcomes in this study. Thus, coping plays an integral role in diminishing the effects of stress on various outcome variables.

While researchers (Pienaar, Rothmann, & Van De Vijver, 2007) evaluated the role of multiple variables and found coping strategies predicted suicide ideation among South African Police, no research studies have incorporated leadership into their models or looked at a 3-way interaction model of stress, coping and leadership. To reiterate, there is a negative relationship between transformational leadership and depersonalization, suggesting higher levels of transformational leadership reduce burnout (Densten, 2005; Thompson et al., 2005). Further, extant research supports both coping and stress as moderators of this relationship (Anshel, 2000; Anshel et al., 2009; Billings & Moos, 1981).

3-Way Interaction of Leadership, Stress, and Coping on Burnout

To further refine the conditions in which the transformational leadership-depersonalization relationship is facilitated or impeded by coping ability in highly stressful situations, the interaction between stress, coping and transformational leadership perceptions are incorporated. Both intuition and theory (e.g., Bass, 1985; Podsakoff et al., 1990, 2003) support the contention that transformational leader behavior should mitigate stress due to the vision, expectations, support, model and stimulation provided by the leader. Indeed, researchers (Densten, 2005; Engel, 2001, 2002) have found that transformational leadership is beneficial in diminishing stress, but less so under highly stressful circumstances (Russell, 2011, 2014). Thus, it appears that transformational leadership is constrained in its effectiveness by

various levels of stressful situations. While we are cognizant of variation in low and high levels of stress on the transformational leadership-burnout relationship (Russell, 2014), we gear our hypothesis toward higher stress. This is due to extant literature supporting police work as higher stress than many other occupations (Hart et al., 1995; Lobel & Dunkel-Schetter, 1990; Violanti & Aron, 1993), thus making this focus of particular interest. Therefore, those officers having lower coping abilities and higher stress find transformational leadership more important thus reducing depersonalization vs. those that have higher coping abilities and are in higher stress situations, making transformational leadership less influential on depersonalization. Therefore, as employee coping ability increases in highly stressful situations, the negative transformational leadership-burnout relationship is weakened.

> *Hypothesis 3: The relationship between transformational leadership and burnout depends upon the interaction between coping and stress.*
> *Hypothesis 3a: Stress and coping will jointly moderate the relationship between transformational leadership and emotional exhaustion such that the negative relationship between transformational leadership and emotional exhaustion is stronger for low coping employees with high stress than for high coping employees with high stress.*
> *Hypothesis 3b: Stress and coping will jointly moderate the relationship between transformational leadership and depersonalization such that the negative relationship between transformational leadership and depersonalization is stronger for low coping employees with high stress than for high coping employees with high stress.*
> *Hypothesis 3c: Stress and coping will jointly moderate the relationship between transformational leadership and personal accomplishment such that the negative relationship between transformational leadership and personal accomplishment is weaker for low coping employees with high stress than for high coping employees with high stress.*

METHODS

Survey

The paper-based survey, used as part of a larger study, consists of 15 sections, each containing multiple sections. Most of the 302 items, including 12 demographic questions in the survey require Likert-style responses. Two of the items are open-ended questions asking respondents to provide their thoughts and opinions about variables. A pilot study was used to assess the validity and reliability of the survey and the instrument was found to be reliable and valid with the pilot study data.

Sample and Procedure

Multiple police departments in the southern and southwestern United States served as the sample for this study. This sample is well suited for study because officers in these departments are responsible for responding to multi-state natural disasters in addition to performing normal police activities (e.g., local, community and state policing, crime response and prevention, etc.). Moreover, the demanding nature of police work (e.g., unpleasant and even dangerous contacts and interactions with civilian and inmate populations), the fact that police face limited resources (particularly financial constraints) and the fact that leadership and stress-related and attitudinal outcomes are salient to this group make them a strong match to the target population.

To begin the data collection efforts, the Chiefs, Sheriffs, and Directors of nine departments were contacted and asked to participate. Researchers were given access to all officers (482) at daily briefings and shift changes where respondents were informed that participation was voluntary. Respondents were also informed that researchers would keep individual responses confidential and were told about the goals of the study and specifics of informed consent. Survey data were collected over a two-week period during shift changes and daily briefings by researchers on premises for all but two departments, where sealed surveys were collected by the watch sergeants and then sent to researchers. Chi Squared tests revealed no differences among respondents where data were collected on premises by researchers and those that were

collected internally and sent to researchers. A total of 379 respondents (78.6% response rate) completed the survey (Table1).

TABLE 1
SURVEY RESPONSE RATE

Agency	# of Surveys Distributed	Response Rate
1	90 (86 usable)	95.6%
2	90 (71 usable)*	78.9%
3	45 (32 usable)	71.1%
4	20 (15 usable)	75.0%
5	30 (15 usable)	50.0%
6	30 (17 usable)	56.7%
7	12 (7 usable)	58.3%
8	15 (11 usable)	73.3%
9	150 (143 usable)*	95.3%
Total	482 (379 usable)	78.6%

 * Internal data collection

The majority of the respondents were non-Hispanic white men, between the ages of 32 and 45. Most officers were married with at least one child living at home and had at least some college experience. Just under half of those responding reported working in urban departments and equally classified their respective agencies as city, county, or state agencies with less than 100 officers. Over 40 percent of the respondents worked for agencies employing between 100 and 500 officers. The majority of respondents ranked themselves as either officers or deputies, having less than 15 years experience in police work, and as working in patrol capacity.

Measures
Transformational Leadership
A 28-item ($\alpha = 0.96$), previously validated measure (Podsakoff et al., 1990) was used to assess transformational leadership. Respondents were instructed to rate how accurately statements like *"Always gives me positive feedback when I perform well"* describe their supervisor (Sergeant, Lieutenant, or higher) on a scale of one to five (1 = *Strongly Disagree* to 5 = *Strongly Agree*).

Burnout
The 24-item (Emotional Exhaustion $\alpha = 0.87$), previously validated MBI measure (permission granted by CPP, 2009) was used to assess burnout. Respondents read statements like *"I feel burned out from my work"* and rated how often an event occurred on a scale of zero to six (0 = n*ever* to 6 = e*veryday*).

Stress
A 60-item ($\alpha = 0.95$) previously validated measure (Spielberger, Westberry, Grier & Greenfield, 1981) was used to assess the stress levels among police officers. The first event listed, *assignment of disagreeable duties*, was given a rating of 4, a moderate amount of stress, in the first column. Subsequent events such as *making arrests alone* and *delivering a death notification* are rated proportionately higher or lower in stress in comparison to being assigned disagreeable duties, which is generally considered moderately stressful by individuals in a variety of occupations (Spielberger et al., 1981). Officers indicated the number of times they personally experienced the event in the past six months by selecting the corresponding number in the second column. A stress index for the Police Stress Survey was created by averaging the summed, product of perceived stress (1 = *no perceived stress* to 7 = *high amount of perceived stress*) and frequency ratings (0 = *never* to 7 = *7+ times*).

Coping

The 48-item (Task-focused α = 0.88; Emotion-focused α = 0.88; Avoidance α = .89), previously validated Coping Inventory for Stressful Situations (CISS) measure (Endler & Parker, 1999) was used to assess coping. Examples of task-focused items are "*Schedule my time better*"; examples of emotion-focused coping items are "*Preoccupied with aches and pains*"; and examples of avoidance include "*Think about the good times I've had*". Respondents were asked to read each item and indicate how much they engage in these types of activities when they encounter a difficult, stressful, or upsetting situation on a scale ranging from 1 to 5 (1 = *not at all* to 5 = *very much*).

Control Variables

Based on a review of the extant literature (Kohan & Mazmanian, 2003; Liu, Spector & Shi, 2008; Violanti & Aron, 1993, 1995; Wolfgang, 1995) and to help minimize spurious relationships, controls for gender (*male = 1, female = 2*), ethnicity (*White (non-Hispanic) = 1, African-American = 2; Asian-American = 3, Hispanic = 4, Other = 5*), age (*18-24 years = 1, 25-31 years = 2, 32-38 years = 3, 39-45 years = 4, Over 45 years = 5*), current rank (*Officer/Deputy = 1, Sergeant = 2; Lieutenant = 3, Captain = 4, Chief or Higher = 5*), and department size in number of sworn officers (*< 10 = 1, 11-50 = 2, 51-100 = 3, 101-500 = 4, > 500 = 5*) were used. Ethnicity, organizational size, and age were coded in groupings to help respondents feel that their ratings were confidential and would not be easy to identify.

Analytical Approach

Hierarchical multiple regression (HMR) analyses was used to test direct hypothesis and hierarchical multiple moderated regression (HMMR) analyses were used to test moderated hypotheses. HMR and HMMR are appropriate because it is important to determine any significant increase in predictive power beyond that of the control variables. Of equal importance is distinguishing between the main and interaction effects, given that moderating and 3-way interaction variables are investigated in this study. Moreover, the order in which the variables are entered into the regression is theoretically important. Tests of moderation were conducted in accordance with Barron and Kenny (1986). To avoid potential autocorrelation between the interaction effect of the independent and moderating variables, independent and moderating variables were centered for the HMMR analyses in this study (Aiken & West, 1991).

RESULTS

Pearson Product-Moment correlation coefficient was used to assess the bivariate relationships among variables in this study. Means, standard deviations and intercorrelations are shown in Table 3. Correlations between predictor and outcome variables are significant and in the expected direction. Correlations associated with the moderator variable are also as expected. The highest correlation between the three variables is .0492, which provides evidence, that although correlated, they are measuring different constructs.

With respect to the control variables, gender is positively correlated with ethnicity (p < 0.01), indicating that women are more likely to be classified as minority in this study. Gender is negatively correlated with department size (p < 0.01) indicating that the percentages of female officers decreases as an overall percentage, as department size increases. As expected, more mature officers tend to achieve higher ranks within departments, and larger departments have fewer ranked officers than smaller departments as a total percentage of officers.

Departments with more ethnically diverse work forces appear to have lower levels of depersonalization and higher levels of avoidance coping behaviors by officers. Age, however is positively associated with emotion coping and negatively associated with avoidance coping behaviors indicating that ethnicity and age play disparate roles in guiding coping decisions for officers in this study. Department size appears to play a role in driving stress levels with smaller departments accounting for larger proportions of reported stress.

TABLE 2
BIVARIATE CORRELATIONS.

	Mean	SD	N	Gender	Ethnicity	Age	DeptSize	Rank	TFL	Stress	TaskCope	Emotion-Cope	Avoid-Cope	EE	PA	DP
Gender	1.10	0.29	388	-												
Ethnicity	1.32	0.88	383	.116*	-											
Age	3.42	1.15	385	.095	.061	-										
DptSize	3.98	0.96	378	-.116*	-.040	-.070	-									
Rank	1.49	0.89	382	-.019	-.056	.432**	-.147**	-								
TFL	3.43	0.80	397	-.076	.011	-.098	.104*	-.004	-							
Stress	10.82	7.66	397	.030	-.032	.042	-.173**	.038	-.261**	-						
TaskCope	3.71	0.59	397	.051	.004	-.027	.034	.086	.207**	.009	-					
Emotion-Cope	2.39	0.71	397	.041	-.004	.108*	-.038	.083	-.003	.201**	.008	-				
AvoidCope	2.52	0.73	397	.050	.110*	-.167**	-.077	-.076	.002	.147**	.079	.303**	-			
EE	1.82	1.16	397	.072	.018	.053	-.056	.085	-.351**	.402**	-.094	.379**	.101*	-		
PA	3.63	1.10	397	.052	-.018	.013	-.049	.037	.152**	-.052	.243**	-.179**	-.013	-.126*	-	
DP	2.16	1.34	397	-.050	-.100*	-.086	-.084	-.087	-.232	.429**	-.016	.164**	.022	.492**	.043	-

DptSize = Department Size; TFL = Transformational Leadership; TaskCope = Task-Focused Coping; EmotionCope = Emotion-Focused Coping; AvoidCope = Avoidance Coping; EE = Emotional Exhaustion; PA = Personal Accomplishment; DP = Depersonalization
*. Correlation is significant at the 0.05 level (2-tailed).
**. Correlation is significant at the 0.01 level (2-tailed).

Transformational leader behavior is significantly correlated with stress and the relationship is in the expected direction. Task-focused coping is also positively correlated with transformational leader behaviors, as is personal accomplishment, as expected. Emotional exhaustion is also negatively associated with leader behavior. Stress is positively associated with emotion-focused and avoidance coping, emotional exhaustion, and depersonalization among officers surveyed in this study. Emotion-focused coping and avoidance coping are correlated and both are correlated with emotional exhaustion in accordance with theory. Emotion-focused coping is also correlated with both of the other dimensions of burnout. Avoidance coping is also related to the emotional exhaustion dimension of burnout.

The effects of transformational leadership on the emotional exhaustion, depersonalization, and personal accomplishment were examined in a separate hierarchically arranged multiple regression analyses. Results are presented in Table 3. Gender, age, ethnicity, current rank, and department size were used as control variables in these analyses.

TABLE 3
HIERARCHICAL REGRESSION MODELS FOR DIRECT RELATIONSHIPS (H1 a-c)

	Emotional Exhaustion		Depersonalization		Personal Accomplishment	
	Step 1	Step 2	Step 1	Step 2	Step 1	Step 2
	β	β	β	β	β	β
Gender	0.063	0.038	-0.058	-0.075	0.042	0.055
Ethnicity	0.035	0.046	-0.079	-0.072	0.015	0.009
Age	0.051	0.006	-0.025	-0.057	-0.036	-0.013
Department Size	-0.021	0.013	-0.025*	-0.081	-0.066	-0.083
Current Rank	0.064	0.088	-0.103*	-0.087	0.050	0.037
TFL		-0.328***		-.232***		0.173***
F Change	1.216	8.021	2.099	5.145	0.669	2.327
R^2	0.017	0.121	0.015	0.029	0.009	0.038
ΔR^2	0.017	0.104	0.065	0.052	0.009	0.029

TFL = Transformational Leadership; TF-Cope = Task Focused Coping
* $p < 0.10$.
** $p < 0.05$.
*** $p < 0.01$.

Hypotheses 1 (a-c) address the main effects between transformational leadership and each dimension of burnout. Hypotheses 1 (a-c) are supported (β = -.328; $p < 0.01$; β = -.232; $p < 0.01$; β = .173; $p < 0.01$). The change in R^2 indicates police stress explains 10, 5, and 3 percent of the variance beyond that explained by the control variables for emotional exhaustion, depersonalization and personal accomplishment respectively. Of the three dependent variables, emotional exhaustion explains the largest percentage of variance (10%). None of the control variables are significant for emotional exhaustion and personal accomplishment outcome variables. For depersonalization, only department size and current rank are marginally significant (β = -.025; $p < 0.10$; β = -.103; $p < 0.10$).

Hypothesis 2 states the relationship between transformational leadership and burnout depends upon perceptions of stress. Hypotheses 2a-c state that the stress influences the direct transformational leadership-burnout relationship such that perceptions of emotional exhaustion and depersonalization increase and perceptions of personal accomplishment diminish when high levels of stress are perceived. Results from HMMR analysis for H2 and H2 (a-c) are depicted in Table 4.

TABLE 4
HIERARCHICAL MULTIPLE MODERATED REGRESSION MODELS FOR DIRECT RELATIONSHIPS (H2 a-c)

	Emotional Exhaustion				Depersonalization				Personal Accomplishment			
	Step1	Step2	Step3	Step4	Step1	Step2	Step3	Step4	Step1	Step2	Step3	Step4
	β	β	β	β	β	β	β	β	β	β	β	β
Gender	.063	-.038	.040	.039	-.058	-.075	-.074	-.073	.042	.055	.055	.054
Ethnicity	.035	.046	.052	.54	-.079	-.072	-.064	-.069	.015	.009	.009	.018
Age	.051	.006	.001	.001	-.025	-.057	-.062	-.062	-.036	-.013	-.012	-.013
Dept. Size	-.021	.013	.063	.064	-.104**	-.081	-.021	-.023	-.066	-.083	-.086	-.082
Cur.Rank	.064	.008	.088	.088	-.103*	-.087	-.086	-.087	.050	0.037	.037	.039
TFL		-.328***	-.249***	-.228*		-.232***	-.137***	-.185		.173***	.168***	.257**
Stress			.326***	.380***			.390***	.264**			-.020	.213
TFL x Stress				-.055				.126				-.234
F Change	1.216	41.350	43.003	.080	2.009	19.814	61.889	.424	.669	10.525	.138	1.186
R^2	.017	.121	.217	.217	.029	.081	.219	.220	.009	.038	.039	.042
ΔR^2	.017	.104	.096	.000	.029	.052	.138	.001	.009	.029	.009	.003

Dept. Size = Department Size; Cur.Rank = Current Rank; TFL = Transformational Leadership; TF-Cope = Task Focused Coping
* $p < 0.10$.
** $p < 0.05$.
*** $p < 0.01$.

Hypothesis 2 is not supported. Stress does not moderate the relationship between transformational leadership and any of the dimensions of burnout. There is no statistically significant moderated relationship for stress between transformational leadership and emotional exhaustion ($\beta = -.005$; *ns*), depersonalization ($\beta = .126$; *ns*), or personal accomplishment ($\beta = -.234$; *ns*).

Hypothesis 3 states stress and coping interact to influence the relationship between transformational leadership and burnout. Specifically, hypotheses 3a-c state that stress and coping interact to influence the direct transformational leadership-burnout relationship such that perceptions of emotional exhaustion and depersonalization increase and perceptions of personal accomplishment diminish when high levels of stress are perceived and that these relationships are stronger (weaker for personal accomplishment) for employees with higher perceived coping skills. Results from HMMR analysis for H3 and H3a-c are depicted in Tables 5-7.

TABLE 5
3-WAY HIERARCHICAL MODERATED MULTIPLE REGRESSION ANALYSIS FOR EMOTIONAL EXHAUSTION

	Step 1	Step 2	Step 3	Step 4	Step 5	Step 6	Step 7	Step 8
	β	β	β	β	β	β	β	β
Gender	.063	.038	.040	.044	.044	.043	.043	.043
Ethnicity	.035	.046	.052	.054	.057	.057	.053	.053
Age	.051	.006	.001	-.003	-.003	-.003	-.006	-.007
Department Size	-.021	.013	.063	.065	.066	.066	.067	.067
Current Rank	.064	.088	.088*	.096*	.096*	.096*	.095*	.095*
TFL		-.328***	-.249***	-.231***	-.207**	-.168	-.291	-.382
Stress			.326***	.330***	.391**	.396**	.104	-.094
TF-Cope				-.070	-.071	-.047	-.216	-.275
Stress x TFL					-.061	-.065	-.118	.102
TFL x TF-Cope						-.050	.137	.259
Stress x TF-Cope							.356	.562
Stress x TFL x TF-Cope								-.235
F Change	1.216	41.350	43.003	2.060	.09	.013	1.272	.042
R^2	.017	.121	.217	.221	.222	.222	.225	.225
ΔR^2	.017	.104	.096	.005	.000	.000	.003	.000

TFL = Transformational Leadership; TF-Cope = Task Focused Coping

*　　$p < 0.10$.
**　$p < 0.05$.
***　$p < 0.01$.

TABLE 6

3-WAY HIERARCHICAL MODERATED MULTIPLE REGRESSION ANALYSIS MODEL FOR DEPERSONALIZATION

	Step 1	Step 2	Step 3	Step 4	Step 5	Step 6	Step 7	Step 8
	β	β	β	β	β	β	β	β
Gender	-.058	-.075	-.074	-.074	-.074	-0.067	-.067	-.070
Ethnicity	-.079	-.072	-.064	-.064	-.069	-0.073	-.080*	-.081*
Age	-.025	-.057	-.062	-.062	-.061	-0.064	-.071*	-.067
Department Size	-.104**	-.081	-.021	-.021	-.023	-0.019	-.016	-.020
Current Rank	-.103*	-.087	-.086	-.088	-.089*	-0.085	-.087	-.090*
TFL		-.232***	-.137**	-.140**	-.189**	-0.568	-.795**	.126
Stress			.390***	.389***	.262	0.216	-.321	1.674*
TF-Cope				.012	.013	-0.219	-.530**	.065
Stress x TFL					.127	0.169	.073	-2.150**
TFL x TF-Cope						0.477	.821*	-.480
Stress x TF-Cope							.655**	-1.427
Stress x TFL x TF-Cope								2.370**
F Change	2.099	19.814	61.889	.063	.430	1.182	4.349	4.342
R^2	.029	.081	.219	.219	.220	.223	.223	.242
ΔR^2	.029	.052	.138	.000	.001	.003	.010	.010

TFL = Transformational Leadership; TF-Cope = Task Focused Coping

* $p < 0.10$.

** $p < 0.05$.

*** $p < 0.01$.

TABLE 7

3-WAY HIERARCHICAL MODERATED MULTIPLE REGRESSION ANALYSIS MODEL FOR PERSONAL ACCOMPLISHMENT

	Step 1	Step 2	Step 3	Step 4	Step 5	Step 6	Step 7	Step 8
	β	β	β	β	β	β	β	β
Gender	.042	.055	.055	.040	.039	.035	.035	.032
Ethnicity	.015	.009	.009	.001	.009	.011	.010	.009
Age	-.026	-.013	-.012	.001	.001	.002	.001	.004
Department Size	-.166	-.083	-.086	-.094*	-.091*	-.094*	-.093*	-.096*
Current Rank	.50	.037	.037	.009	.011	.008	.008	.006
TFL		.173***	.168**	.105*	.186**	.417	.373	1.075*
Stress			-.020	-.036	.176	.204	.100	1.620
TF-Cope				.249***	.248**	.389	.329	.782*
Stress x TFL					-.212	-.238	-.257	-1.951*
TFL x TF-Cope						-.290	-.224	-1.160
Stress x TF-Cope							.126	-1.461
Stress x TFL x TF-Cope								1.806
F Change	.669	10.525	.138	22.125	1.038	.378	.138	2.137
R^2	.009	.038	.039	.096	.099	.100	.100	.100
ΔR^2	.009	.029	.000	.057	.003	.001	.000	.006

TFL = Transformational Leadership; TF-Cope = Task Focused Coping

* $p < 0.10$.

** $p < 0.05$.

*** $p < 0.01$.

Hypothesis 3b is supported for depersonalization ($\beta = 2.370$; $p < 0.05$). Hypotheses 3a and 3c are not supported for emotional exhaustion and personal accomplishment respectively ($\beta = -0.235$; *ns*; $\beta = 1.806$; *ns*). None of the control variables remain significant through all steps of the regression. Only ethnicity and current rank remain marginally significant in the final step of the regression ($\beta = -0.081$; $p < 0.10$; $\beta = -0.090$; $p < 0.10$).

The 3-way moderated relationship of transformational leadership on burnout by stress and coping is depicted in Figure 2. To the degree that high levels of stress and coping are present there is a distinct difference in perception of depersonalization between individuals categorized as high-stress/high and low coping and low-stress/high and low coping. Thus, higher levels of stress appear to drive higher engagement in depersonalization, regardless of coping perception.

FIGURE 2
3-WAY INTERACTION OF TRANSFORMATIONAL LEADERSHIP AND COPING FOR DEPERSONALIZATION
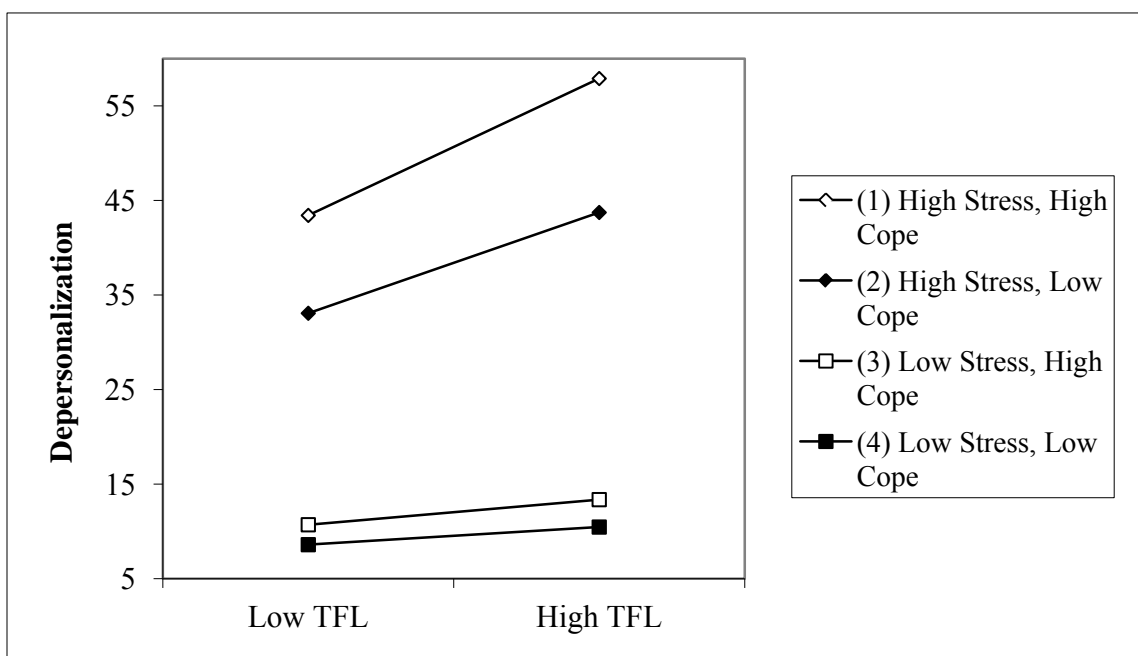
The ordinal relationships depicted in Figure 2 indicate that for officers perceiving both high and low levels of stress, respondents with higher perceived task-focused coping skills engaged in higher overall levels of depersonalization behavior, contrary to expectations. Moreover, officers in the high stress-high high coping category perceive the highest levels of depersonalization, thus the interaction of high levels of stress and coping appear to intensify perceptions of depersonalization and these perceptions increase to the degree that leaders exhibit increasing levels of transformational leader behavior.

DISCUSSION

Empirical and theoretical studies associated with transformational leadership (e.g., Bartone, 2006; Densten, 2005; Engel, 2001, 2002; Podsakoff et al., 1990, 1996; Russell, 2011, 2014) and burnout (e.g., Bakker & Heuven, 2006; Densten, 2005; Maslach, 1982; Lambert et al., 2010; Martinussen et al., 2007; Maslach & Schaufeli, 1993; Thompson et al., 2005) suggest that there is an inverse relationship between transformational leadership and burnout (i.e., emotional exhaustion, depersonalization, and (diminished)

personal accomplishment). Findings in this study support these conclusions. Specifically, the linear relationships between transformational leadership and each dimension of burnout was significant and in the hypothesized direction.

Theories of motivation (e.g., expectancy theory and social exchange theory) provide connectional frameworks for the argument that coping interacts with stress to influence the effect of transformational leader behavior on burnout. Expectancy theory (Vroom, 1964) states that individuals are motivated to exert high levels of effort when they believe the outcome will be positive performance appraisal and organizational reward such as bonus or promotion and that the reward will satisfy the employee's personal goals. Social exchange theory (Blau, 1964) is based on the idea that individuals maximize pleasurable and minimize less pleasurable exchanges (Cropanzano & Mitchell, 2005). Integration of these two theories provides theoretical grounding for the exchange between leaders and followers in organizations. Transformational leaders attempt to motivate followers to transcend self-interest for the benefit of the organization by influencing both values and aspirations of followers by activating higher-order needs and followers work to accomplish tasks and achieve organizational goals in exchange for mutually agreed upon or implicit benefits such as salary, bonus, rewards and leader recognition.

Findings in this study support this conclusion, but results are more complex than expected. While results for hypotheses H3 and H3a are in line with both expectancy and social exchange theories, there is a point at which high levels of transformational leadership, stress, and coping converge and officers find it necessary to distance themselves and depersonalize from circumstances surrounding the stressful events. Specifically, officers in this study using high task-focused coping under high-perceived stress engaged in increasingly higher levels of depersonalization, contrary to expectations. Moreover, engagement in depersonalization increased at increasing rates for high stress-high coping officers at increasing levels of transformational leadership. The question is why leader behavior and coping do not converge to overcome the negative effects of stress on burnout.

While researchers identify main and interaction or "buffering" effects associated with coping and social support (e.g., Patterson, 2003), others (Turner, 1983) underscore the importance of examining whether coping strategies and social support remain statistically significant where individuals are exposed to increasingly higher levels of stress. Moreover, some researchers (Chrisholm, Kasl, & Mueller, 1986; Kauffmann & Beehr, 1986) found that social support increased, rather than decreased, effects on well-being – a "reverse buffering effect". Researchers (Volanti, 1992) also found that the more coping strategies used by police recruits, the greater the distress, whereas, fewer coping strategies resulted in lower levels of distress. Researchers recently found that educational attainment and rank were correlated with both increased and decreased use of coping strategies among police (Patterson, 2000). Reverse buffering effects coupled with the potential for increased distress due to increased task-focused coping among police may help explain the increase in depersonalization despite higher levels of task-focused coping and perceived transformational leader behaviors in the present study. Moreover, it could be that officer's fall back on training in increasingly stressful circumstances and increased leader behaviors simply add to the stress. Thus, it is important to control for the type of stress (i.e., life-threatening, bureaucratic, administrative, task-specific, etc.) in future studies.

Limitations

A potential limitation to this study is mono-method bias, a threat to construct validity due to the use of only one method of measurement (Trochim & Donnelly, 2007). Procedural and statistical remedies (e.g., use of previously validated measures, post hoc comparisons to archival demographic data, partial correlation procedure, scale trimming, the use of a panel of experts to determine appropriate exclusions, scale reordering, altering the design of the questionnaire such that the dependent and criterion variables are randomly placed throughout the questionnaire, etc.) were applied to minimize the effects of consistency artifacts (Podsakoff, MacKenzie, Lee, & Podsakoff, 2003; Podsakoff & Organ, 1986). Moreover, Harmon's one-factor test and confirmatory factor analysis revealed the presence of multiple factors, with Eigenvalues greater than one, accounting for various levels of variance indicating no common factor is present (Podsakoff et al., 2003). Researchers recommend using structural equation

modeling (SEM) to minimize the effects of common method variance (Podsakoff et al., 2003). SEM was not the a suitable statistical analysis for assessing relationships in this study because tests of moderation were required. Correlations in the bivariate correlation analysis point to the notion that common method variance, although present, presents less of a concern in our study (Spector, 2006). Thus, while every effort was used to minimize potential effects, it is impossible to rule out potential bias due to common method variance.

The sample in this study represents a variety of individuals from various agencies. Only one high-risk occupation, however, was examined in this study. Officers from multiple agencies from the city, county, and state level were surveyed representing a wide cross-section of police agencies. In addition, rural, suburban, and urban departments ranging in size from a few officers to well over 500 officers were included in this study. Nonetheless, external validity is limited and generalizing results from this study should be done with caution. It could be that police officers have differing needs for transformational leadership, so it will be important to investigate these relationships in a variety of high-risk and less risky occupations to address this limitation.

Theoretical and Managerial Contributions

There is an abundance of research evaluating the relationship between stress and burnout among police (e.g., Bakker & Heuven, 2006; Densten, 2005; Maslach, 1982; Maslach & Schaufeli, 1993; Lambert et al., 2010; Martinussen et al., 2007; Thompson et al., 2005). Few studies look at the relationship between transformational leadership and burnout, and fewer still evaluate how stress and coping influence this relationship (e.g., Barton, 2006; Griffin, Hogan, & Lambert, 2012; Lambert, Hogan, Barton-Ballessa, & Jiang, 2012). This study provides a first step in addressing this important gap in the literature. As such, one of the major theoretical contributions of this study is the assessment of the moderating role of stress and coping on the relationship between leadership and burnout among individuals in high-risk occupational settings.

Results from this study also have implications for managers. First and foremost, findings are in alignment with research in the area (Bakker & Heuven, 2006; Barton, 2006; Densten, 2005; Lambert et al., 2010; Martinussen et al., 2007; Russell, 2011, 2014; Thompson et al., 2005) confirming that transformational leadership is inversely associated with perceptions of emotional exhaustion and depersonalization and directly associated with perceptions of personal accomplishment. Specifically, followers' perceptions of each dimension of burnout increases as perceptions of leader's transformational behavior are perceived. Moreover, followers are able to reduce perceived burnout by using low levels of task-focused coping strategies when stress levels are low, but have less influence when using high levels of task-focused coping strategies at increasing stress levels and when leaders are exhibiting high levels of leadership behaviors. The intersection of high levels of these three appears to create circumstances where a "reverse buffering effect" is present and officers engage in higher levels of depersonalization.

Potentially these results allow managers to better understand how to structure supervisor-subordinate relationships in order to minimize the effects of stress on perceived burnout at varying levels of stress. Accordingly, the positive impacts of transformational leadership should be understood and encouraged, to the extent that it is effective in reducing burnout, facilitating positive coping and diminishing the negative effects of lower levels of stress. Managers should aware that providing transformational leadership is a good thing – under less stressful circumstances. Under highly stressful circumstances, a different leadership style (e.g., participative, authentic leadership, or supportive leadership) might be better suited to attenuate perceived burnout, particularly when coping is necessary.

Future Research

It is important that future research efforts investigate these hypotheses with other samples from other high-risk and less risky occupations to determine the robustness of results. Moreover, longitudinal design, collecting data from multiple sources, and conducting field interviews will help address questions centering on common method variance. Adding additional outcome variables will expand the nomological network related to these associations.

CONCLUSION

An abundance of leadership research exists, the majority showing the positive associations with desired individual and organizational outcomes. Research and managerial recommendations about transformational leadership have implicitly stated that this type of leader behavior is beneficial. This study found that although transformational leadership has positive direct main effects on burnout, interactive effects of stress and coping are more interesting and complex than once thought – particularly under increasingly stressful circumstances. More specifically, results indicate that the interaction of leadership and coping may actually augment burnout, particularly at higher stress levels. It may be that there is too much of a good thing when it comes to transformational leader behavior and task-focused coping – questions for further study. My hope is that this study will stimulate additional questions and that future investigations will further knowledge about the associations regarding transformational leadership behaviors, task-focused coping, stress and burnout in addition to other important variables.

REFERENCES

Aiken, L. S. & West, S. G. 1991. *Multiple regression: Testing and interpreting interactions*. Thousand Oaks, CA: Sage Publications.

Anshel, M. H. 2000. A conceptual model and implications for coping with stressful events in police work. *Criminal Justice and Behavior*, 27(3); 375-400.

Anshel, M. H., Robertson, M. & Caputi, P. 1997. Sources of acute stress and their appraisals and reappraisals among Australian police as a function of previous experience. *Journal of Occupational and Organizational Psychology,* 70; 337-356.

Asterita, M. F. 1985. *The physiology of stress.* New York: Human Sciences Press.

Arter, M. L. 2008. Stress and deviance in policing. *Deviant Behavior 29*(1), 43-69.

Bakker, A. B. & Heuven, E. 2006. Emotional dissonance, burnout, and in-role performance among nurses and police officers. *International Journal of Stress Management,* 13(4): 423-440.

Band, S. R. & Manuele, C. A., 1987. Stress and police officer performance: An examination of effective coping behavior. *Journal of Police Criminal Psychology,* 3; 30-42.

Baron, R. M., & Kenny, D. A. 1986. The moderator-mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. *Journal of Personality and Social Psychology, 51*(6), 1173-1182.

Bartone, P. T. 2006. Resilience under military operational stress: Can leaders influence hardiness? *Military Psychology,* 18; 131-148.

Bass, B. M. 1985. *Leadership and performance beyond expectations*. New York: Free Press.

Billings, A. G., & Moos, R. H. 1981. The role of coping responses and social resources in attenuating the impact of stressful life events. *Journal of Behavioral Medicine, 4*; 139-157.

Billings, A. G., & Moos, R. H. 1984. Coping, stress, and social resources among adults with unipolar depression. *Journal of Personality and Social Psychology, 46*; 887-891.

Blau, P. M. 1964. *Exchange and Power in Social Life*. New York: John Wiley & Sons.

Brown, J. M. & Campbell, E. A. 1990. Sources of occupational stress in the police. *Work and Stress*, 4; 305-318.

Brown, J. M. & Campbell, E. A., 1994. *Stress and policing: Sources and strategies*. Chichester: Wiley.

Burke, R. J. 1993. Work-family stress, conflict, coping, and burnout in police officers. *Stress Medicine,* 9; 171-180.

Chrisholm, R. R, Kasl, S. V. & Mueller, L. 1986. The effects of social support on nuclear worker responses to the Three Mile Island incident. *Journal of Occupational Behavior, 7*. 179–193.

Cordes, C. & Dougherty, T. W. 1993. A review and an integration of research on job burnout. *Academy of Management Review,* 18; 621-656.

Cordes, C., Dougherty, T. W. & Blum, M. 1997. Patterns of burnout among managers and professionals: a comparison of models. *Journal of Occupational Behavior,* 18; 685-701.

Cropanzano, R., & Mitchell, M.S. 2005. Social exchange theory: An interdisciplinary review. *Journal of Management*, 31; 874-900.

Dantzer, M. L. 1987. Police-related stress: A critique for future research. *Journal of Police and Criminal Psychology,* 3; 43-48.

Densten, I. L. 2005. The relationship between visioning behaviors of leaders and follower burnout. *British Journal of Management,* 16; 105-118.

Deschamps, F., Pagnon-Badiner, L., Marchand, A., & Merle, C. 2003. Sources and assessment of occupational stress in the police. *Journal of Occupational Health,* 45; 358-364.

Endler, N. 1997. Stress, anxiety and coping: The multidimensional interaction model. *Canadian Psychology, 38*; 136-153.

Endler, G. R. & Parker, D. A. 1994. Assessment of multidimensional coping: Task, emotion, and avoidance strategies. *Psychological Assessment*, 6(1); 50-60.

Endler, G. R., & Parker, D. A. 1999. *Coping Inventory for Stressful Situations manual.* New York: Multi-Health Systems, Inc.

Engel, R. S. 2001. Supervisory styles of patrol sergeants and lieutenants. *Journal of Criminal Justice*, 29*;* 341-355.

Engel, R. S. 2002. Patrol officer supervision in the community policing era. *Journal of Criminal Justice ,* 30; 51– 64.

Evans, B. J., Coman, G. J., Stanley, R. O. & Burrows, G. D. 1993. Police officers' coping strategies: An Australian police survey. *Stress Medicine, 9*; 237–246.

Folkman, S., & Lazarus, R. S. 1980. An analysis of coping in a middle-aged community sample. *Journal of Health and Social Behavior, 21*, 219-239.

Folkman, S., & Lazarus, R. S. 1985. If it changes it must be a process: A study of emotion and coping during three stages of a college examination. *Journal of Personality and Social Psychology, 48;* 150-170.

Folkman, S., & Lazarus, R. S. 1986. Stress processes and depressive symptomatology. *Journal Abnormal Psychology, 95*; 107-113.

Folkman, S., Lazarus, R. S., Dunkel-Schetter, C., Delongis, A., & Gruen, R. J. 1986. Dynamics of a stressful encounter: Cognitive appraisal coping and encounter outcomes. *Journal of Personality and Social Psychology, 50*; 992-1003.

Gerber, M., Hartman, T., Brand, S., Holsboer-Trachler, E., & Pühse, U. 2010. The relationship between shift work, perceived stress, sleep and health in Swiss police officers. *Journal of Criminal Justice,* 38; 1167-1175.

Griffin, M. L., Hogan, N. L., & Lambert, E. G. 2012. Doing "people work" in the prison setting: An examination of the job characteristics model and correctional staff burnout. *Criminal Justice and Behavior*, 39(9); 1131-1147.

Harris, K. J. & Kacmar, K. M. 2005. Easing the strain: The buffer role of supervisors in the perceptions of politics–strain relationship. *Journal of Occupational and Organizational Psychology,* 78; 377-354.

Hart, P. M., Wearing, A. J., & Headey, B. 1996. Police stress and well-being: Integrating personality, coping and daily work experiences. *Journal of Occupational and Organizational Psychology*, 68; 133-156.

He, N., Zhao, J., & Archbold, C. 2002. Gender and police stress: The convergent and divergent impact of work environment, work-family conflict, and stress coping mechanisms of female and male police officers. *Policing: An International Journal of Police Strategies & Management,* 25; 687-708.

Jamal, M., & Baba, V. 2000. Job stress and burnout among Canadian managers and nurses: An empirical examination. *Canadian Journal of Public health,* 91(6); 454-458.

Kaufmann, G. M. & Beehr, T. A. 1986. Interactions between job stressers and social support: some counter-intuitive results. *Journal of Applied Psychology, 71*; 522–526.

Kohan, A., & Mazmanian, D. 2003. Police work, burnout, and pro-organizational behavior. *Criminal Justice and Behavior,* 30; 559-583.

Lambert, E. G., Altheimer, I,. & Hogan, N. L. 2010. Exploring the relationship between social support and job burnout among correctional staff. *Criminal Justice and Behavior,* 37(11); 1217-1236.

Lambert, E.G, Hogan, N. L., Barton-Ballessa, S. M., & Jiang, S. 2012. Examining the relationship between supervisor management trust and job burnout among correctional staff. *Criminal Justice and Behavior,* 39(7); 938-957.

Latack, J. C., & Havlovic, S. J. 1992. Coping with job stress: A conceptual evaluation framework for coping measures. *Journal of Organizational Behavior, 13*; 479-508.

Lazarus, R. S. & Folkman, S. 1984. *Stress, appraisal, and coping.* New York: Springer Publishing Company.

Liu, C., Spector, P. E., & Shi, L. 2008. Use of both qualitative and quantitative approaches to study job stress in different gender and occupational groups. *Journal of Occupational Health Psychology, 13(4);* 357-370.

Lobel, M. & Dunkel-Schetter, C. 1990. Conceptualizing stress to study the effects on health: Environmental, perceptual, and emotional components. *Anxiety Research,* 3; 213-230.

Loon, M, Lim, Y. M., Lee, T. H., & Tam, C. L. 2012. Transformational leadership and job related learning. *Management Research Review,* 35(3/4); 192-205.

Lord, V. B., Gray, D. O. & Pond, S. B. 1991. The police stress inventory: Does it measure stress? *Journal of Criminal Justice,* 19; 139-149.

Maslach, C. 1982. *Burnout: The cost of caring.* Englewood Cliffs, NJ: prentice Hall.

Maslach, C. & Jackson, S. E. 1984. Burnout in organizational settings. *Applied Social Psychology Annual,* 5; 133-153.

Maslach, C., Jackson, S. E. & Leiter, M. P. 1996. *Maslach Burnout Inventory manual* (3rd ed.). Mountain View, CA: CCP, Inc.

Maslach, C. & Schaufeli, W. B. 1993. Historical and conceptual development of burnout. In W. B. Schaufeli, C. Maslach, & T. Marek (Eds.), *Professional burnout: Recent developments in theory and research* (pp. 1-16). Washington, DC: Taylor Francis.

Martinussen, M, Richardson, A. M., & Burke, R. J. 2007. Job demands, job resources, and burnout among police officers. *Journal of Criminal Justice*, 35; 239-249.

Moon, M. M. & Jonson, C. L. 2012. The influence of occupational strain on organizational commitment among police: A general strain theory approach. *Journal of Criminal Justice,* 40; 249-258.

Patterson, G. T. 2003. Examining the effects of coping and social support on work and life stress among police officers. *Journal of Criminal Justice, 31*: 215–226.

Pearlin, L. I., & Schooler, C. 1978. The structure of coping. *Journal of Health and Social Behavior, 19*; 2-21.

Pienaar, J., Rothmann, S. & Van De. Vijver, Fons J. R. 2007. Occupational stress, personality traits, coping strategies, and suicide ideation in the South African police service. *Criminal Justice and Behavior, 34(*2); 246–258.

Podsakoff, P. A., MacKenzie, S. B. & Bommer, W. H. 1996. A meta-analysis of the relationships between Kerr and Jermier's substitutes for leadership and employee job attitudes, role perceptions, and performance. *Journal of Applied Psychology,* 81*;* 380-399.

Podsakoff, P. M., MacKenzie, S. B., Lee, J-Y. & Podsakoff, N. P. 2003. Common method bias in behavioral research: A critical view of the literature and recommended remedies. *Journal of Applied Psychology,* 88(5); 879-903.

Podsakoff, P. M., MacKenzie, S. B., Moorman, R. H. & Fetter, R. 1990. Transformational leader behaviors and their effects on followers' trust in leader, satisfaction, and organizational citizen behaviors. *Leadership Quarterly,* 1(2); 107-142.

Podsakoff, P. A. & Organ, D. W. 1986. Self-reports in organizational research: Problems and prospects. *Journal of Management,* 12; 531-544.

Rogers, K. 1976. Marriage and the police officer. *Police College Magazine,* 12; 40-42.

Rowold, J., & Schlotz, W. 2009. Transformational and Transactional Leadership and Followers' Chronic Stress. *Kravis Leadership Institute, Leadership Review*, 9; 35-48.

Russell, L. 2011. High-risk Occupations: Employee Stress and Behavior Influenced by Leadership. *Paper presented at the Decision Sciences Conference, Boston*, 19-22 November (#408-3920).

Russell, L. (2014). An Empirical Investigation of High-risk Occupations: Leader Influence on Employee Stress and Burnout among Police. *Management Research Review, 37*(4).

Shane, J. M. 2010. Organizational stressors and police performance. *Journal of Criminal Justice,* 38; 807-818.

Spector, P. E. 2006. Method variance in organizational research: Truth or urban legend? *Organizational Research Methods,* 9; 221-232.

Spielberger, C., Westberry, L., Grier, K. & Greenfield, G. 1981. *The police stress survey: Sources of stress in law enforcement*. Tampa, Florida: Human Resources Institute.

Tang, T. L. & Hammontree, M. L. 1992. The effects of hardiness, police stress, and life stress on police officers' illness and absenteeism. *Public Personnel Management,* 21(4); 493-510.

Thompson, B. M., Kirk, A. & Brown, D. F. 2005. Work based support, emotional exhaustion, and spillover of work stress tot eh family environment: A study of policewomen. *Stress and Health,* 21; 199-207.

Trochim, W. K. M., & Donnelly, J. P, 2007. *Research methods knowledge base*. Mason, OH: Thompson.

Turner, R. J. 1983. Direct, indirect, and moderating effects of social support on psychological distress and associated conditions. In H. B. Kaplan (Ed.). *Psychosocial stress: Trends in theory and research* (pp. 105 – 155). New York: Academic Press.

Violanti, J. & Aron, F. 1993. Source of police stressors, job attitudes, and psychological distress. *Psychological Reports*, 72; 899-904.

Violanti, J. M. & Aron, F. 1995. Police stressors: Variations in perception among police personnel. *Journal of Criminal Justice,* 23(3); 287-294.

Weick, K. E., Sutcliffe, K. M., & Obstfeld, D. 1999. Organizing for high reliability: Processes of collective mindfulness. *Research in Organizational Behavior*, 1; 81-123.

Weick, K. E., Sutcliffe, K. M., & Obstfeld, D. 2005. Organization and the process of sensemaking. *Organization Science,* 16; 409-421.

Wolfgang, A. P. 1995. Job stress, coworker social support, and career commitment: A comparison of female and male pharmacists. *Journal of Social Behavior and Personality,* Vol. 10, pp. 149-160.

Yukl, G. A. 1989. Managerial leadership: A review of theory and research. *Yearly Review of Management,* 15; 251-289.

Yukl, G. 2012. Effective leadership behavior: What we know and what questions need more attention. *Academy of Management Perspectives*, 26; 66-85.